The VINCI Workspace

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About the VINCI Workspace

- The VINCI Workspace is a FREE high-performance computing environment that serves research and business intelligence communities (Operations)
- Firewall provides enhanced data security
- Access to computing power, software tools, databases, SAS/Grid, file and data storage
- Can be accessed from outside the VA through VA VPN solutions of Rescue and CAG
- The VINCI Workspace and shared Project Folders allow for national collaboration in a research group

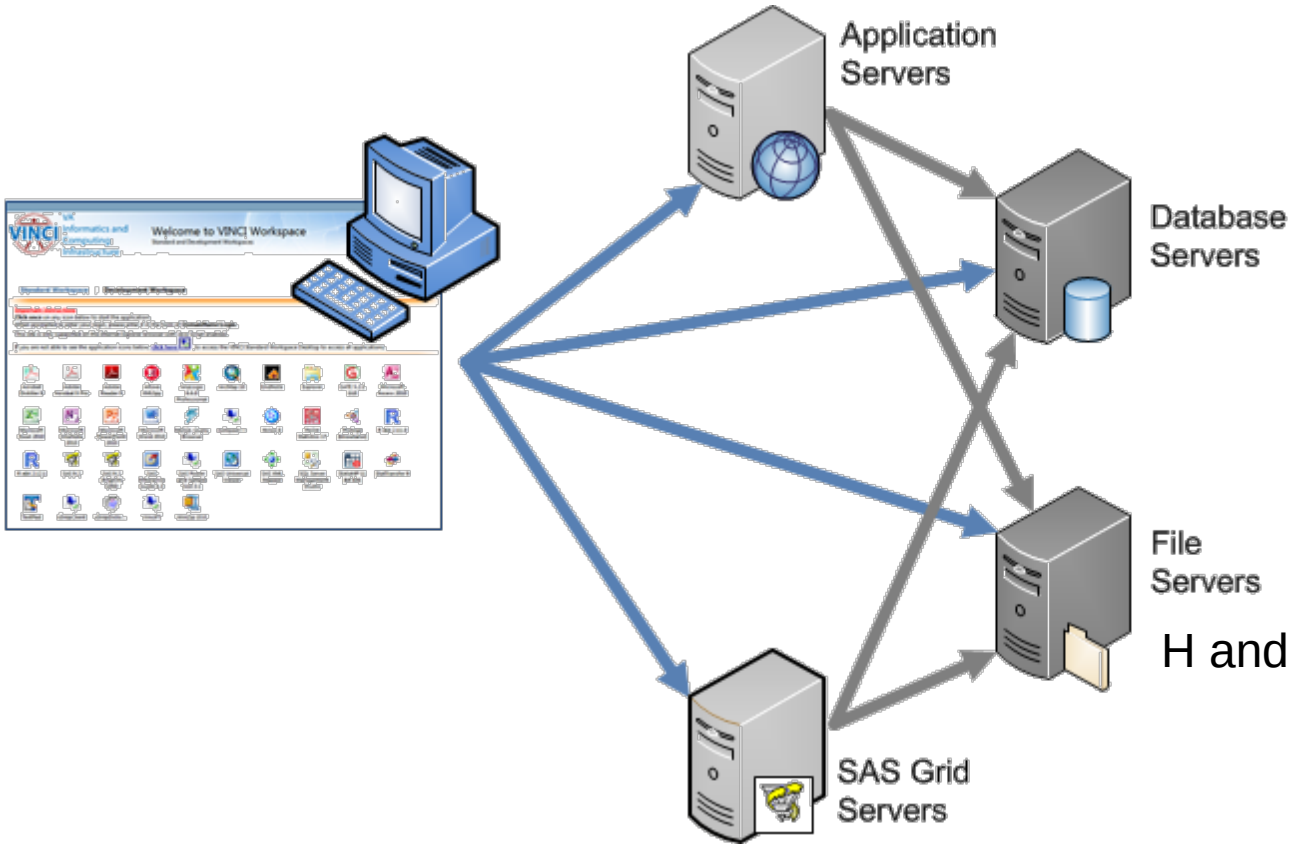
About the VINCI Workspace

- Comes in two variations
  - Standard Workspace
  - Development Workspace
- **Standard Workspace**
  - Standardized environment
  - Shared resources
  - Software restrictions
  - No Administrator privileges
- **Development Workspace**
  - Special purpose usage (custom coding, use of non-standard software)
  - Administrator privileges

Standard VINCI Workspace

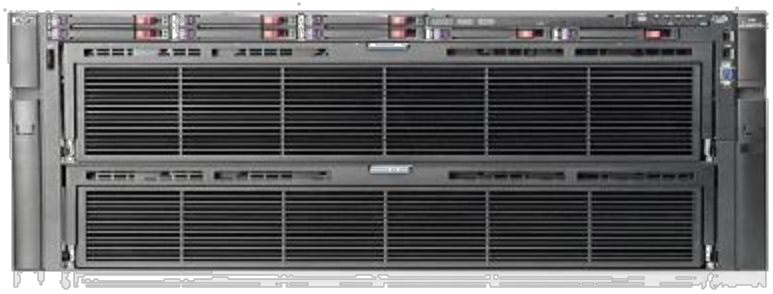
- Windows Server 2008 Enterprise R2 x64 SP2 Operating System
- No Administrative permissions
- Fixed software package (can request other software)
- 4 shared logical processors
- Shared 16 GB RAM (can request more)
- No Internet access

Standard Workspace Architecture

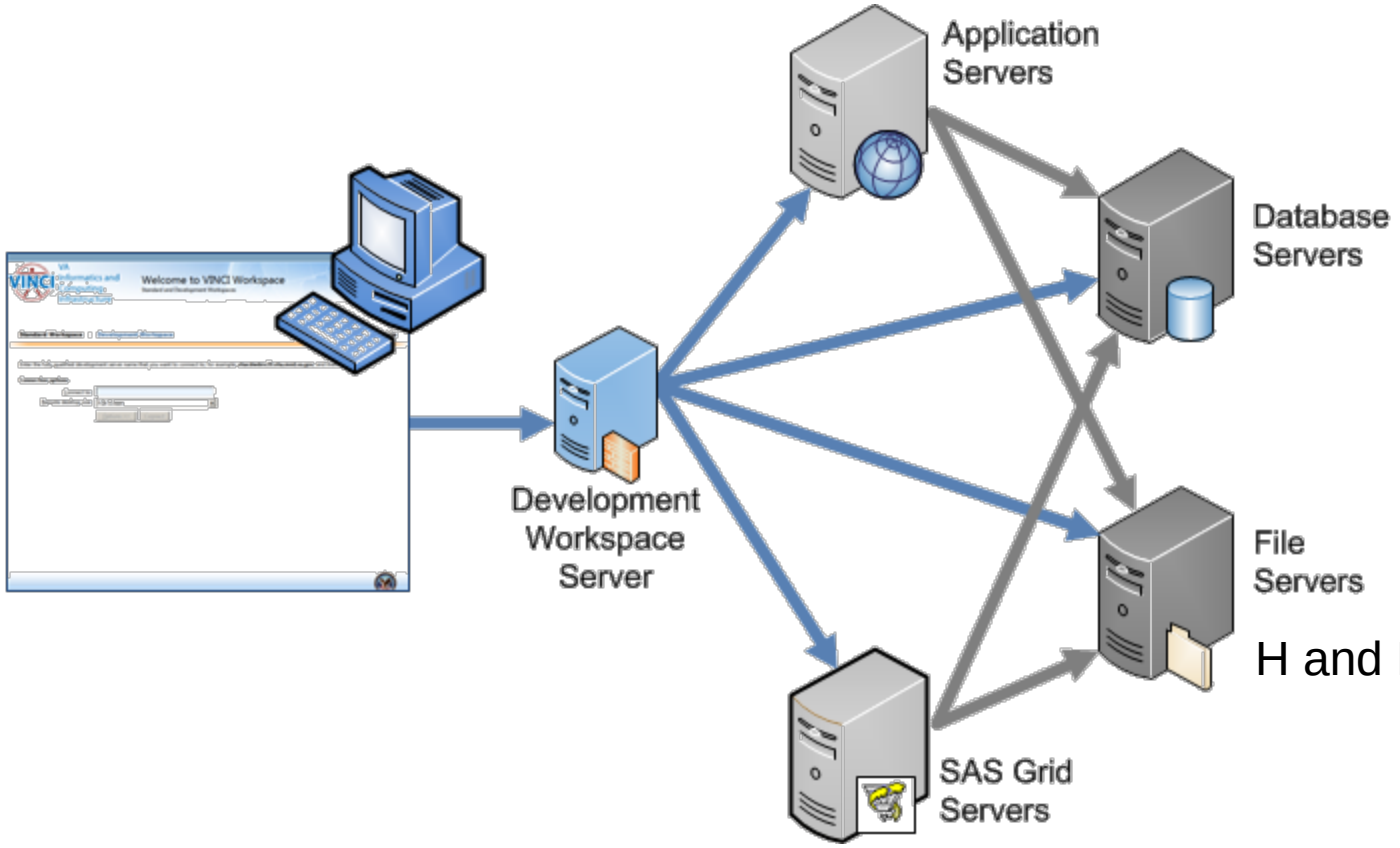


Development VINCI Workspace

- Windows Server 2008 Enterprise R2 x64 SP2 Operating System
- Administrative permissions
- Install additional software yourself (S-drive)
- 1 logical processors (can request more)
- 4 GB RAM (can request more)
- No Internet access



Development Workspace Architecture

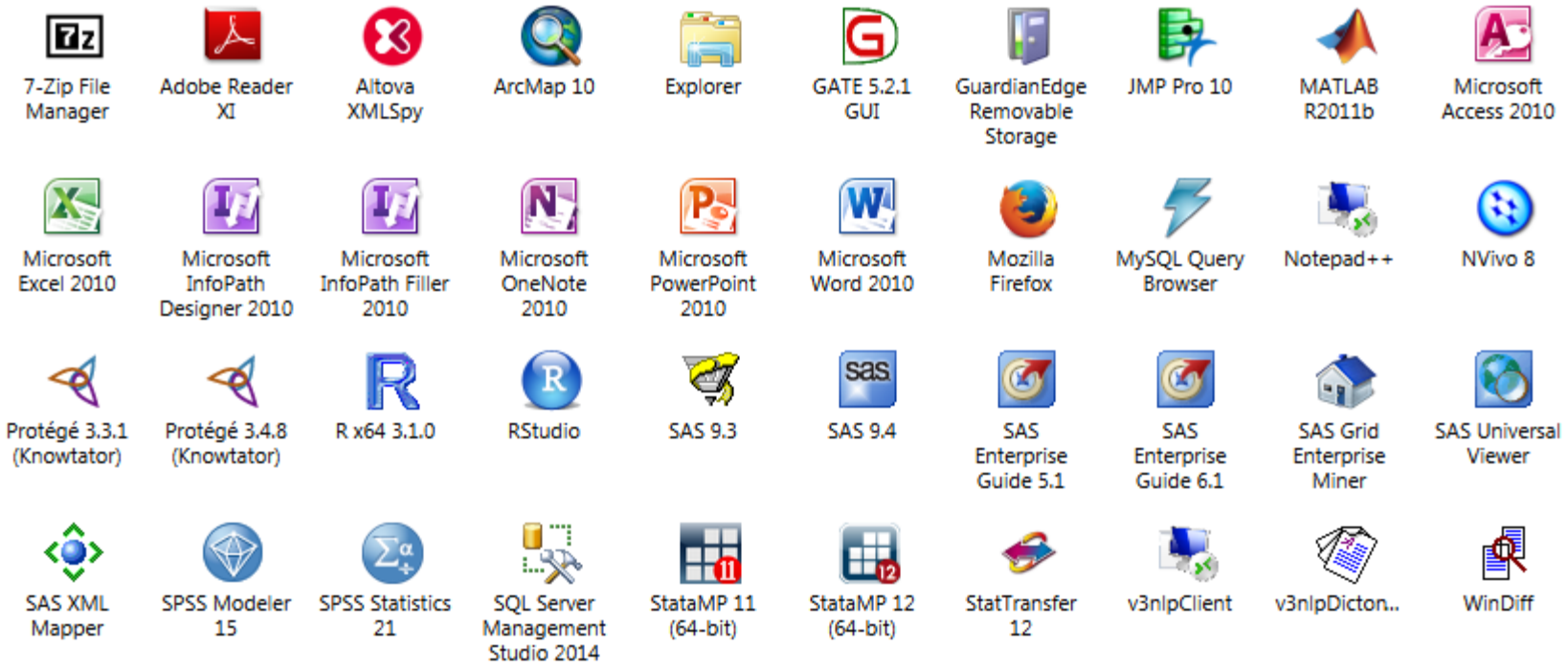


Data Storage Options

- H-Drive Personal Folder
  - 10 GB standard size
  - For personal file storage only
  - NOT for storing study data
- P-Drive Project Folders
  - 100 GB standard size (can request more)
  - Intended for storage of shared project files
  - Access is controlled and limited to study staff
  - Specifically intended for study data storage
- Microsoft SQL 2014 server databases
- Tape and Disk backup

Workspace Software

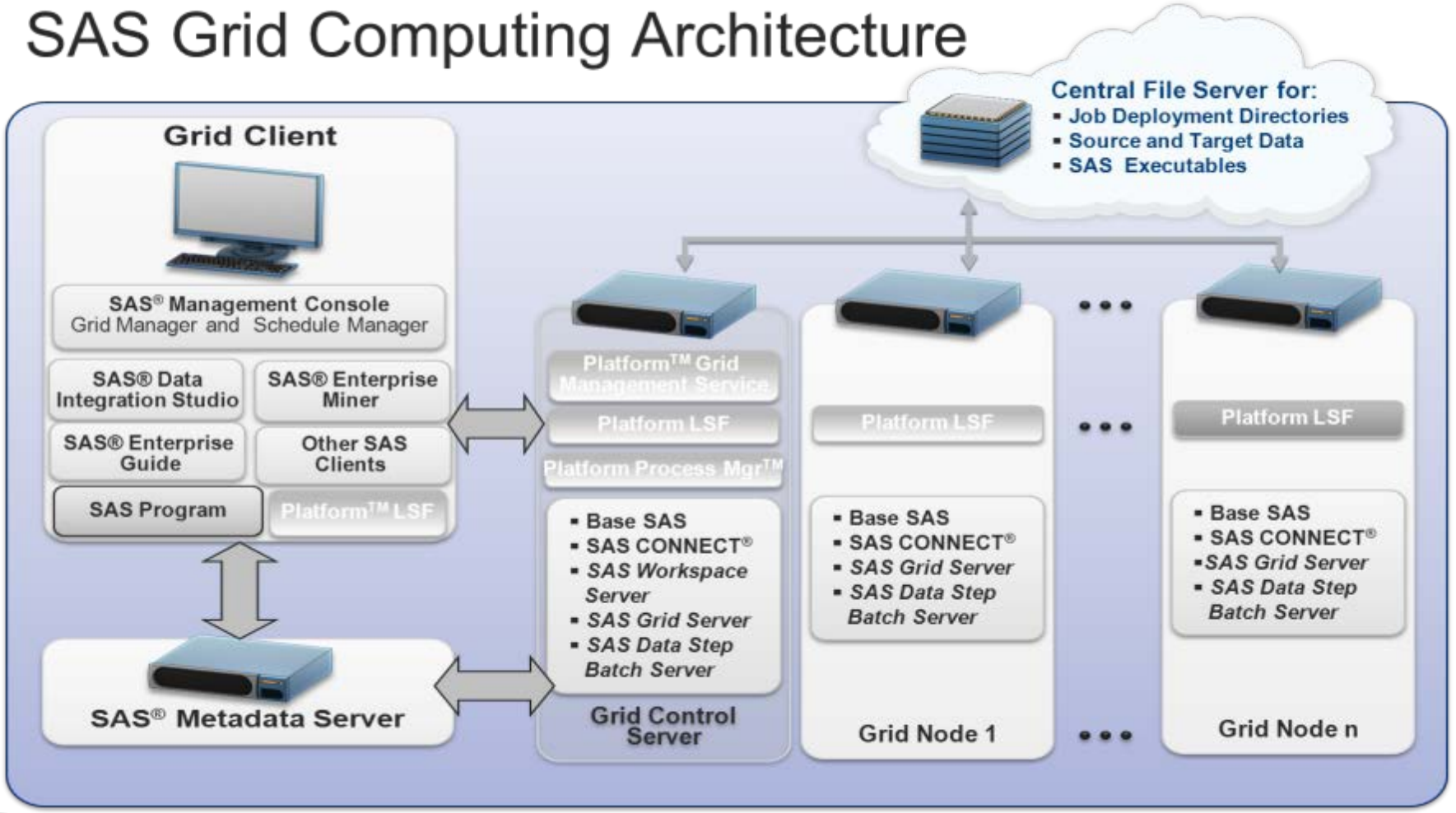
- VINCI provides, STATA, R, SAS, SPSS, MatLab, NLP, and other software for FREE



VINCI SAS 9.4/Grid

- Distributed management of SAS jobs
- 10 clustered Linux servers (RHEL 6.5 as O.S.)
- 64GB of RAM, 8 CPUs and 25 job slots per server
- 10GB Ethernet connection to CDW/VINCI data servers
- Latest SAS9.4 release (T94M1)
- Abundant storage
  - NetApp storage device (76TB initially available)

SAS Grid Architecture



SAS Enterprise Guide (EG) 6.1

- GUI client tool for easy connection to Grid
- Leverages background metadata definitions
- Programming Editor windows for experienced coders
- Task Wizards for SAS beginners
- Great for code development

VINCI Accessible Databases

- CDW Production domains (SQL)
  - Allergies, Appointment, BCMA (Bar Code Medication Administration), Consult, Dental, Dimensions (CDW), Fee (Purchased Care), Health Factors, Immunization, Inpatient Encounters, Lab Chemistry, Lab Microbiology, Mental Health Assessment, Orders (CPRS), Outpatient Pharmacy, Outpatient Visits, Patient (Demographics), PCMM, SPatient, Staff, SStaff, and Vital Signs
- CDW Raw domains (SQL)
  - Beneficiary Travel (CBO), Bill Claims (CBO), Compensation & Pension Exam, Electronic Time Attendance, Emergency Dept. Int. Software (EDIS), Echocardiogram, Equipment Inventory, IFCAP, Inpatient Pharmacy-IV, Inpatient Pharmacy-Unit Dose, MyHealthe Vet, Non-VA Meds, Oncology, Paid, Prosthetics, Radiology, and Surgery

VINCI Accessible Databases

- DSS (AKA - MCA) NDE (SQL and SAS)
- Vital Status (SQL, SAS, and AITC Mainframe)
- BIRLS (SAS and AITC Mainframe)
- MedSAS including VetsNet (SAS and AITC Mainframe)
- Care Assessment Need Scores (SQL)
- HERC (SQL)
- AITC Mainframe

- *Coming soon* - Observational Medical Outcomes Partnership (OMOP) modeled data

VINCI Poll #1

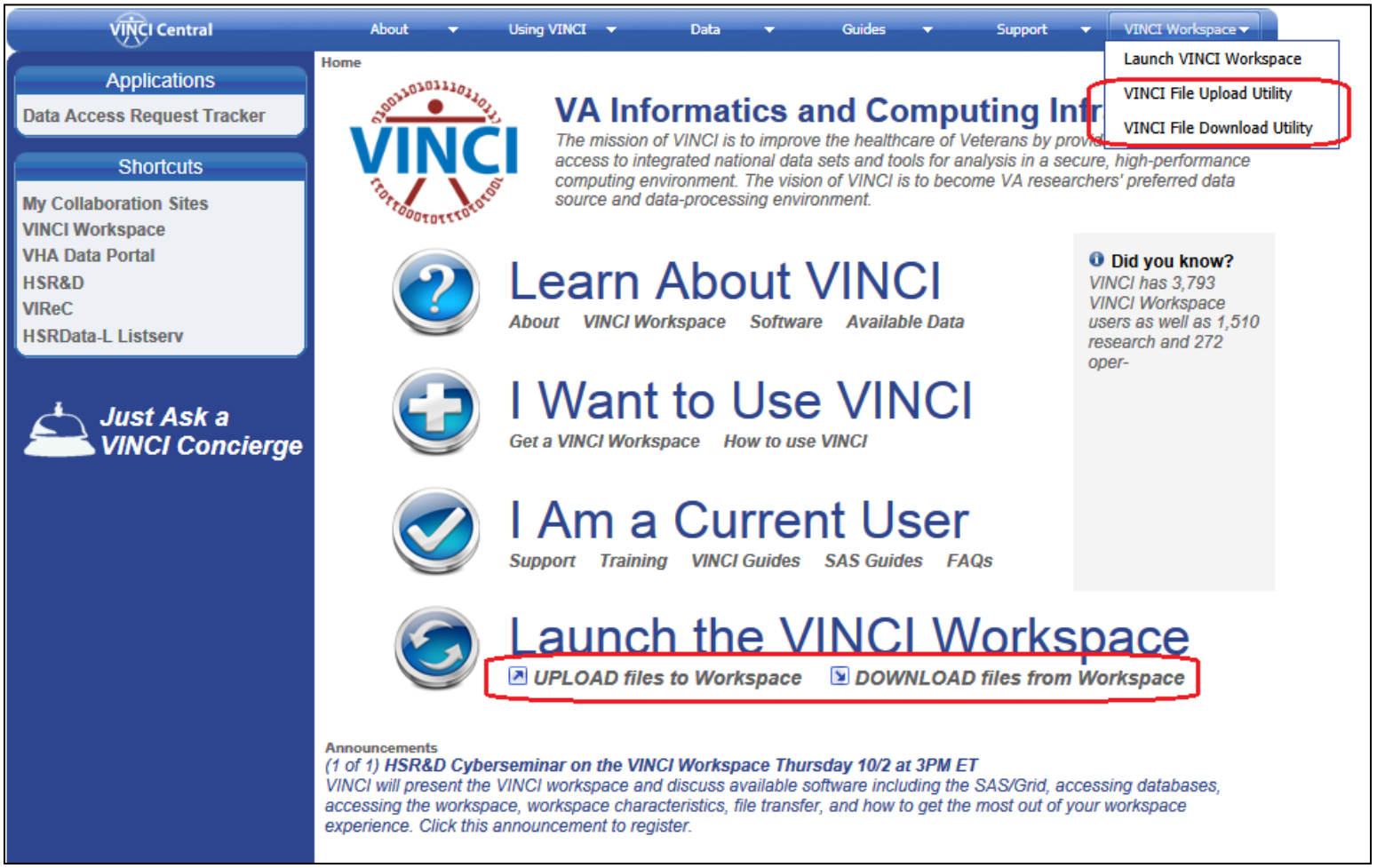
Select all that apply:

- ☐ I have not used the VINCI Workspace
- ☐ I have used the VINCI Workspace
- ☐ I have used the VINCI SAS/Grid
- ☐ I want to use the VINCI Workspace
- ☐ I want to use the VINCI SAS/Grid

VINCI File Transfer Options

- Upload
  - VINCI File Upload Utility
    - Can transfer one file at a time (ZIP multiple files together into one)
    - Limited to 2GB per transfer
    - Available from VINCI Central
  - Attachmate Reflection FTP Client
    - For upload of files greater than 2GB
    - Available in your computer's Programs
- Download
  - VINCI File Download Utility
    - Can transfer one file at a time (ZIP multiple files together into one)
    - Available from VINCI Central

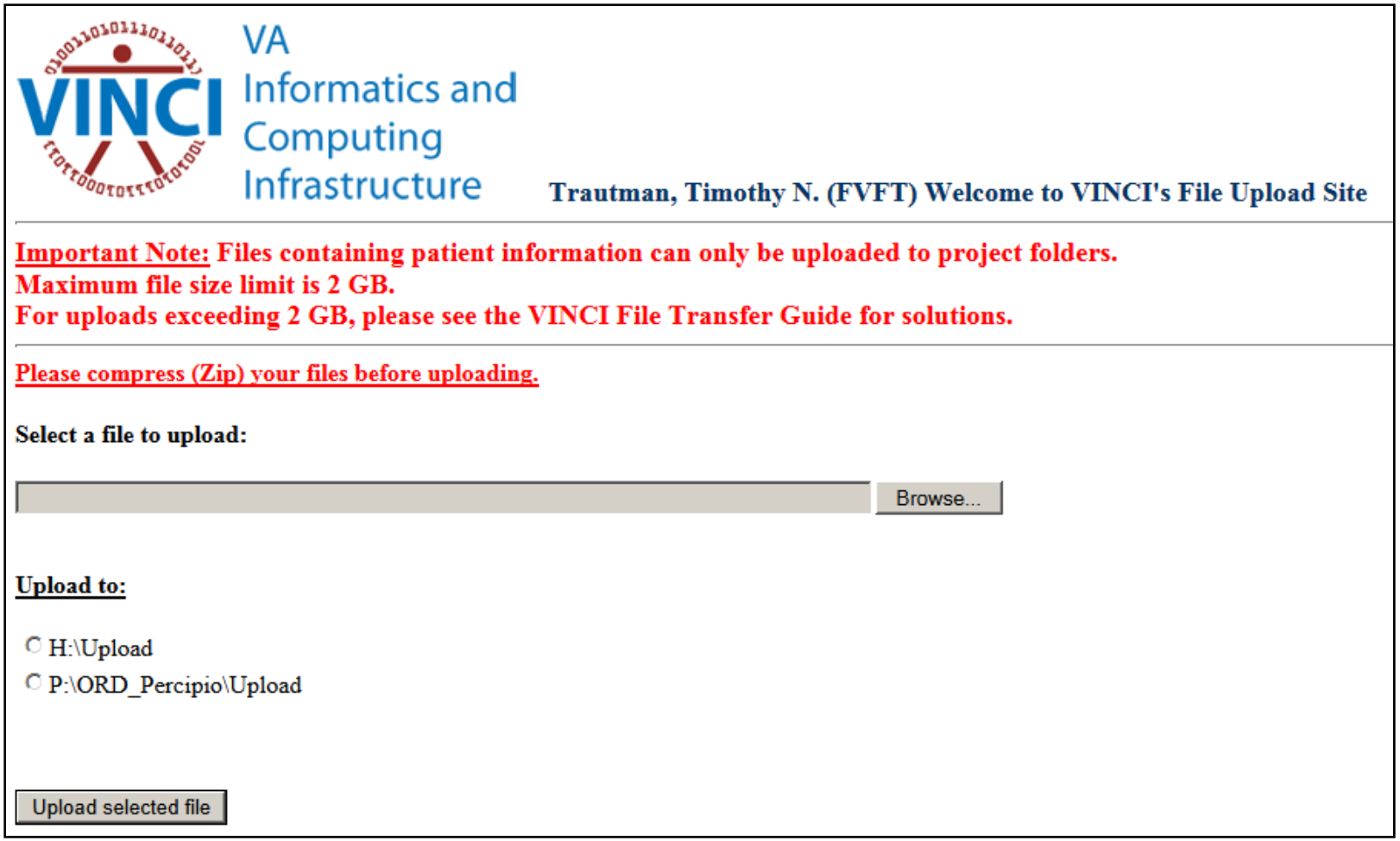
VINCI File Transfer Options



VINCI File Upload Utility

- VA Intranet-based utility application for copying files into the workspace
- Copies to either your H-drive or P-drive project folder per your selection
- Creates an “Upload” folder for the contents
- VINCI File Upload Utility: https://vhacdwrdgat.vha.med.va.gov/WebApps/FileTransfer/VinciUpload.aspx

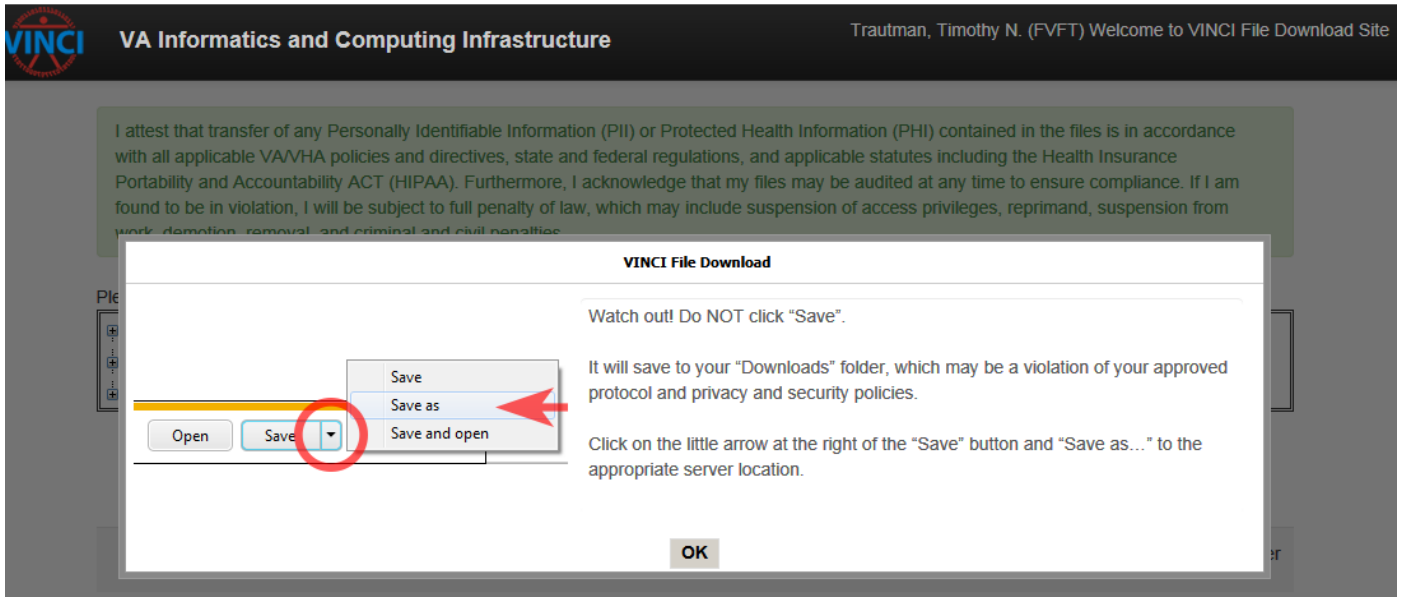
VINCI File Upload Utility

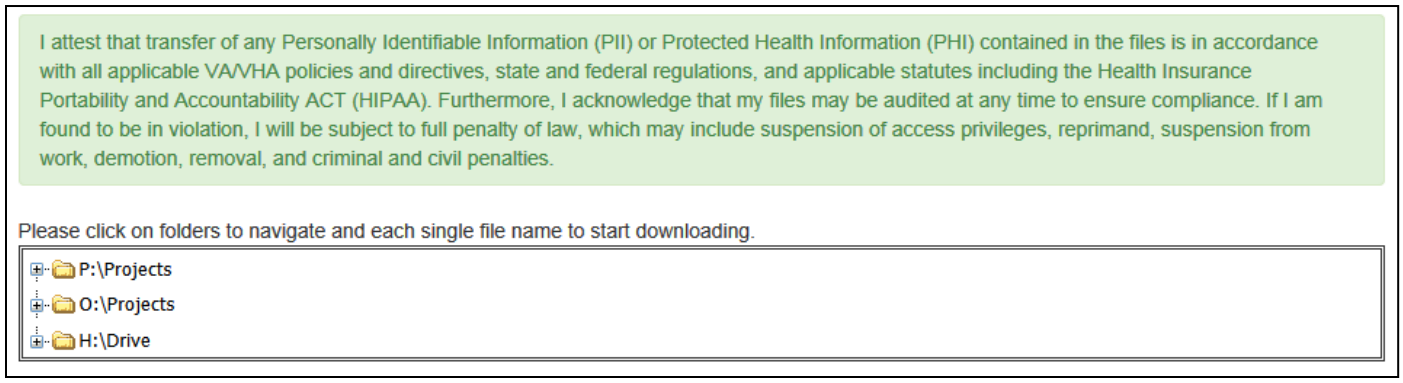


VINCI File Download Utility

- VA Intranet-based utility application for copying files from the workspace
- Copies files from your H-drive or P-drive project folders per your selection
- Audit Process
  - Copies of transferred files are archived
  - Copied files from IRB Research studies are audited for PHI, PII, and SI
- VINCI File Download Utility: https://vhacdwrdgat.vha.med.va.gov/WebApps/FileTransferutility/Vftdownload.aspx

VINCI File Download Utility





Download Restrictions

- Operations Project Users
  - Can transfer files out without permission
    - Identifiable PHI/PII/SI data
    - Aggregate data
    - Documents - papers, analysis, presentations
- IRB Research Study Users
  - Can transfer files out *without* permission
    - Aggregate data
    - Documents - papers, analysis, presentations *without* PHI/PII/SI
  - Can transfer out *with* data steward permission
    - Data containing PHI/PII/SI
    - To local secure server

Download Restrictions

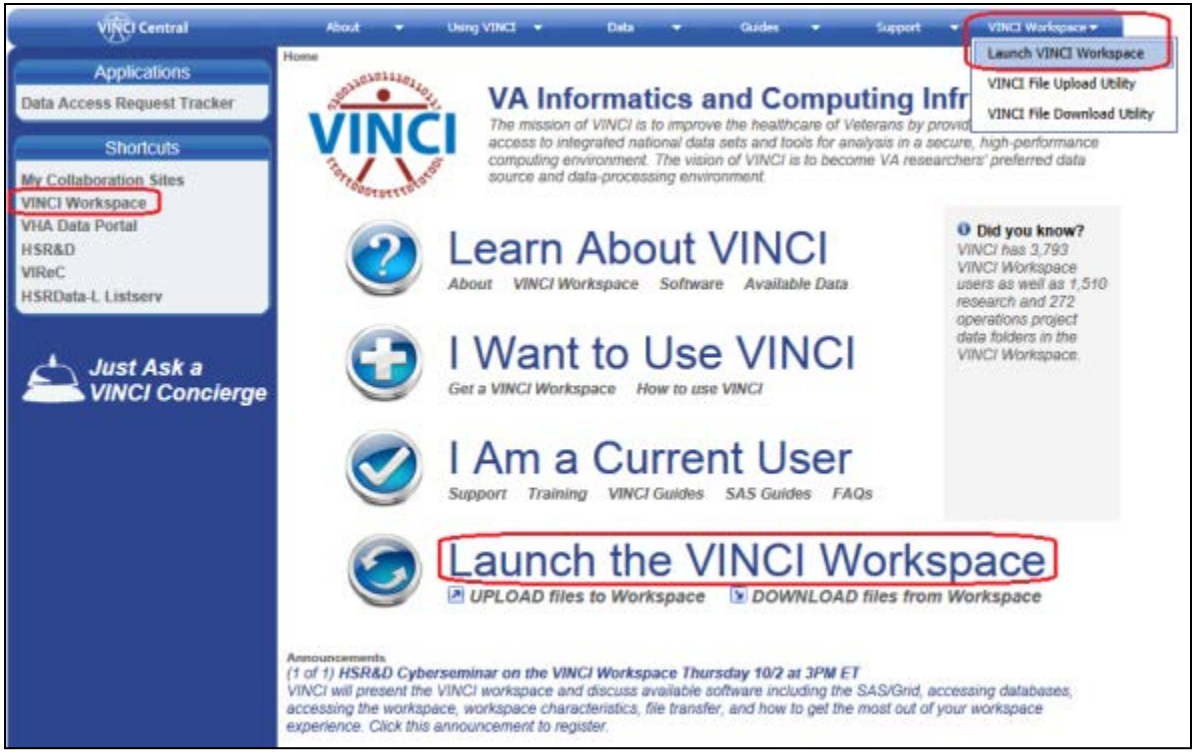
- Before downloading any file, familiarize yourself with HIPAA and VHA definitions of PHI and PII; VHA Handbook 1605.1, Appendix B, is a good resource
- If you are not sure whether you may download PHI/PII for your project, read your Research Request Memo
- Once you have selected the "Download" link, be aware that browsing to and opening any file will cause the file to be downloaded. Do not use “Open” in utility. If you open a file and then close the utility without saving the file, it will still be written to your temporary internet files folder in violation.

Download Restrictions

- Pay attention to the warning that is displayed as soon as you select the "Download" link, which advises you to select "Save As" and not "Save" when downloading the file. Selecting "Save" will copy the file to your "Downloads" folder in violation. "Save As" will allow you to copy the file to your local secure server.
- When you select the name of the file you wish to download, click on it ONE time. A message will display at the bottom of the screen when the download is complete (usually just a matter of seconds). Each click on the file name results in another download of that file.

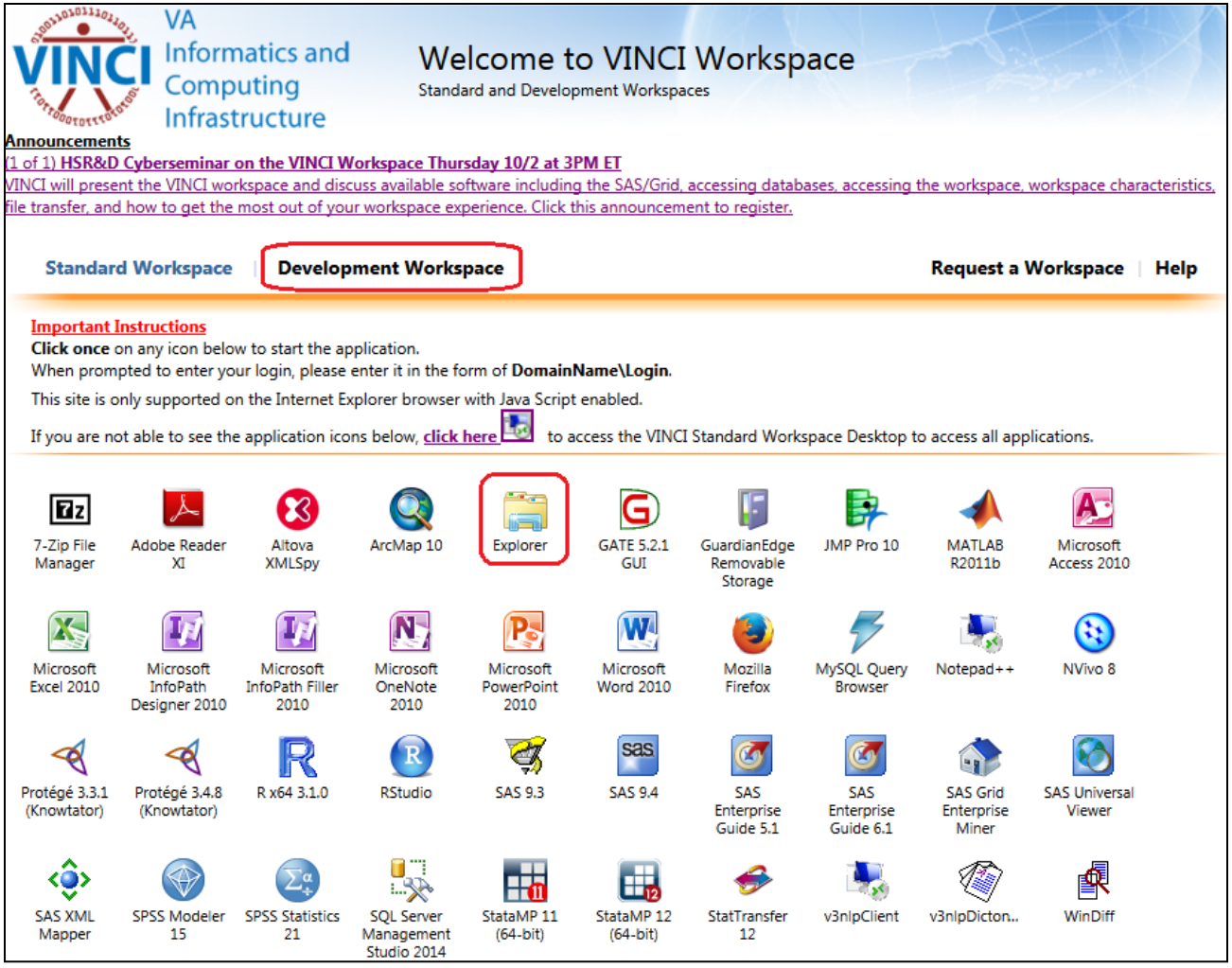
Accessing the VINCI Workspace

- From VINCI Central on VA Intranet at vaww.vinci.med.va.gov



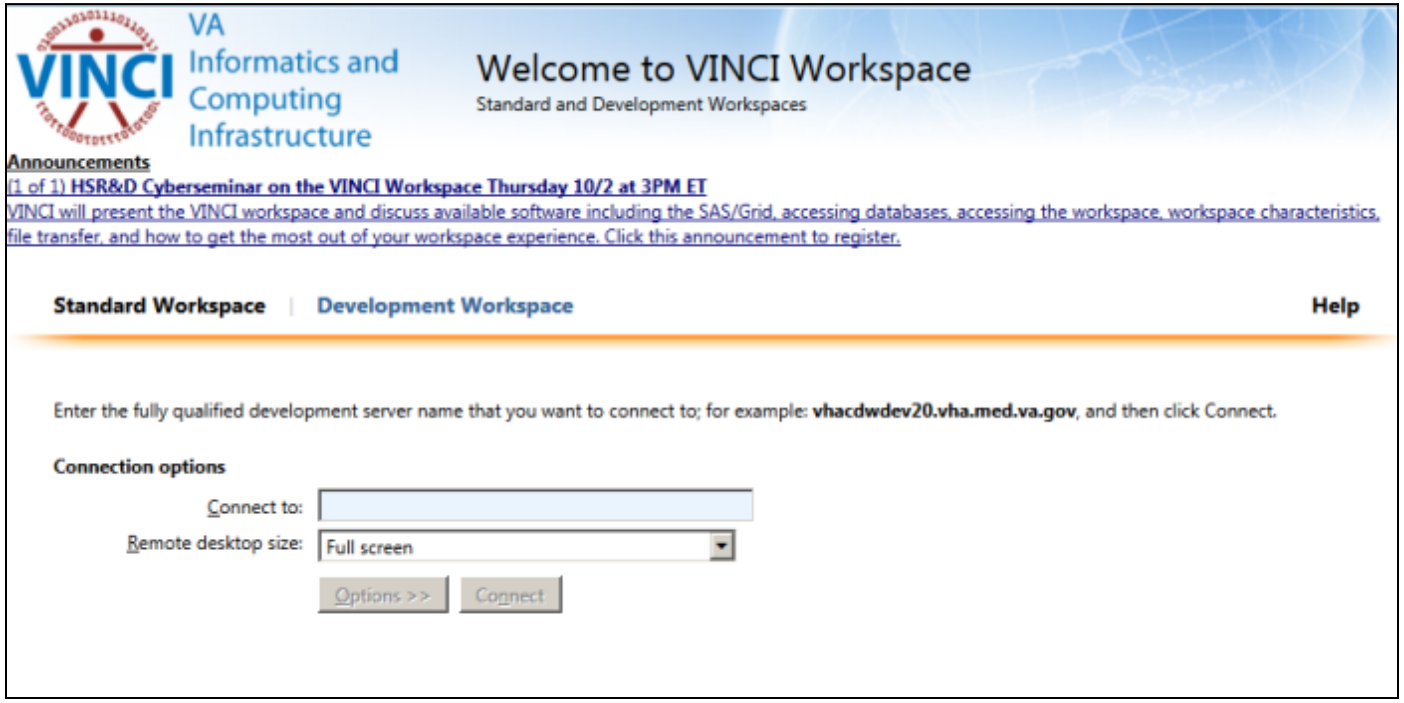
- From outside the VA, see VINCI Workspace User Guide

VINCI Workspace Web Interface



VINCI Workspace Web Interface

- Development Workspace Login
- Connect to **vhacdwdevXX.vha.med.va.gov**



Workspace Restrictions

- No Internet access (for data security)
- Cannot copy and paste to/from workspace
  - Can save info as file and download/upload within regulations -
    - Operations download PHI/PII is OK
    - IRB Research download PHI/PII by permission
- Copy and paste between applications in the workspace is restricted as applications run from several different servers
  - Same server - can copy and paste
  - Different server - cannot copy and paste

VINCI Poll #2

Select the one thing you want most:

- ☐ I want more computing power (CPUs)
- ☐ I want more RAM
- ☐ I want more analytical software
- ☐ I want access to more databases
- ☐ I want more data storage

VINCI Innovation

Things in incubation:

- Hadoop – massively parallel, clustered data file structure in an new open source, commodity based hardware platform.
- NLP – Natural Language processing – there are commercial as well as homegrown software solutions for analyzing the millions of notes that are acquired every day

VINCI Innovation Infrastructure

- High speed Infiniband network – will allow multipath transfers of data at 40 gig/sec
- Use of SMB (Server Message Blocks) in Windows 2012 will allow multi – parallel paths to be used for both speed and redundancy
- Windows 2012 Cluster allows VM's to be moved and backed up and monitored very easily

Become a VINCI User

- Currently there are 3,825 users; 1,520 research folders; and 274 operations folders
- We are an approved, secure, central analytic platform for performing IRB research and supporting clinical operations activities

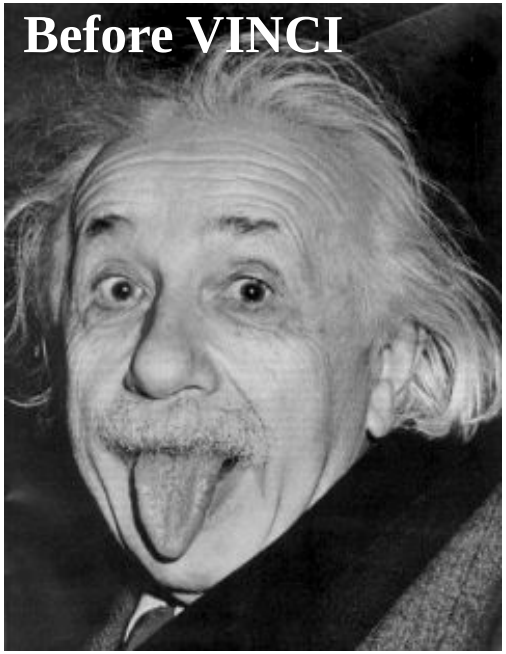
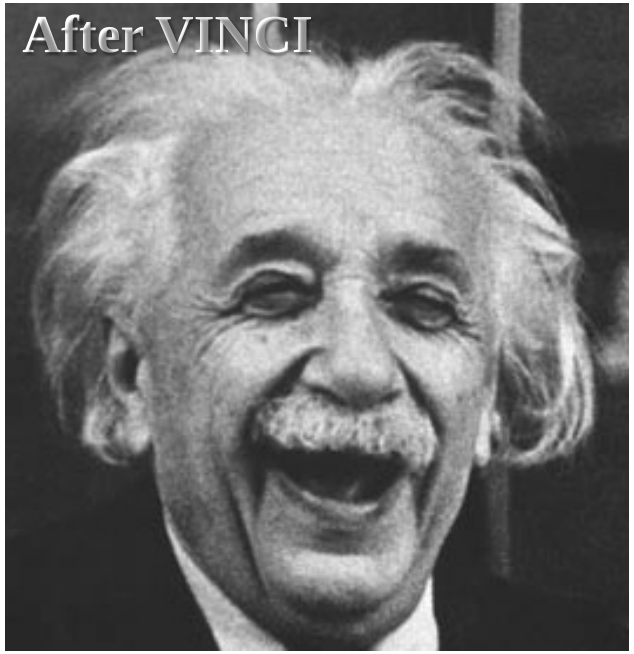
Become a VINCI User

- **For IRB Research**
  - New project for NDS-approved data access, use Data Access Request Tracker (DART)
    http://vaww.vhadataportal.med.va.gov/DataAccess/DARTRequestProcess.aspx
- **For Operations**
  - New project for NDS-approved data access, get NDS Healthcare Operations approval first
    http://vaww.vhadataportal.med.va.gov/DataAccess/HealthcareOperationsRequestProcess.aspx
  - Second, use CDW Project Request Form following *Request a VINCI Workspace for Operations* guide
    http://vaww.vinci.med.va.gov/vincicentral/documents/Request_a_VINCI_Workspace_for_Operations.pdf
- **Have own data already?** Contact VINCI@va.gov

VINCI Workspace Resources

- **VINCI Central**: http://vaww.vinci.med.va.gov
- **VINCI Workspace User Guide**: http://vaww.vinci.med.va.gov/vincicentral/documents/VINCI_Workspace_User_Guide.pdf
- **VINCI Database User Guide**: http://vaww.vinci.med.va.gov/vincicentral/documents/VINCI_Database_User_Guide.pdf
- **VINCI File Transfer Guide**: http://vaww.vinci.med.va.gov/vincicentral/documents/VINCI_File_Transfer_Guide.pdf

Questions?

VINCI Support: VINCI@va.gov

SAS Support: VINCISASAdmins@va.gov